The Multi-band OFDM Alliance Special Interest Group (MBOA-SIG) represents a growing membership of domestic and international companies, including Intel Corporation, Texas Instruments, Staccato Communications, Alereon Inc. and Wisair. MBOA-SIG is seeking IEEE adoption of a multi-band orthogonal frequency division multiplexing (MB-OFDM) standard for the next generation of short range, broadband wireless technology for residential and commercial use. To this end, MBOA-SIG is requesting a waiver of certain FCC measurement procedures and policies for multi-band orthogonal frequency division multiplexing (MB-OFDM) ultra-wideband (UWB) devices.

Renesas Technology America, Inc. is writing in support of this waiver. Renesas Technology Corp. designs and manufactures highly integrated semiconductor system solutions for mobile, automotive and PC/AV markets. Established on April 1, 2003 as a joint venture between Hitachi, Ltd. (TSE:6501, NYSE:HIT) and Mitsubishi Electric Corporation (TSE:6503) and headquartered in Tokyo, Japan, Renesas Technology is one of the largest semiconductor companies in the world and the world's leading microcontroller supplier globally. Besides microcontrollers, Renesas Technology offers flash memories, system-on-chip devices, Smart Card ICs, mixed-signal products, SRAMs and more. www.renesas.com

Currently, the Commission requires that MB-OFDM systems be measured with band sequencing or pulse “gating” procedures – procedures that the Office of Engineering and Technology has indicated were developed with pulse-based UWB systems in mind. These measurement rocedures require pulse repetition intervals to be compared to the length of some quiescent period or “gating” interval. However, there is no quiescent period in an MB-OFDM system because the QPSK-modulated OFDM “pulse train” in each band is never gated on or off. As such, these pulse “gating” testing procedures cannot apply effectively to MB-OFDM systems. Clearly, a clarification or waiver of the current test procedures is needed.

The FCC Office of Engineering and Technology has indicated that any such clarification or waiver would depend on whether MB-OFDM systems could be shown to cause no greater threat of harmful interference to licensed services than pulsed UWB systems. To address this concern, MBOA-SIG conducted simulated and actual interference testing with representative samples of OFDM and pulsed UWB devices to determine heir comparative interference potential. The tests conclusively demonstrate that MB-OFDM systems pose no greater threat of harmful interference than pulsed UWB systems permitted under the FCC’s rules.

Accordingly, MBOA-SIG seeks a waiver of the FCC’s pulse “gating” measurement procedures to the extent that these procedures apply to MB-OFDM systems and seeks to allow MB-OFDM systems to be tested for average emissions under normal operating conditions. Renesas Technology America, Inc. believes this waiver is clearly necessary to permit MB-OFDM technology to compete on an equal footing with pulse-based UWB systems so that the marketplace – not the Commission – can decide which of the emerging technologies will best serve the public interest.

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